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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/824,035

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Jian-Hsing Lee

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EXAMINER

VU, HUNG K

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/824,035	Applicant(s) LEE ET AL.	
	Examiner Hung Vu	Art Unit 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-11 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-11 and 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The indicated allowability of claims 7 and 12, which is now claim 24, is withdrawn in view of the reference(s) to Fujiki et al. (PN 5,736,791). Rejections based on the cited reference(s) follow.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-6, 8, 11, 24, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujiki et al. (PN 5,736,791, of record).

Fujiki et al. discloses, as shown in Figures 1-3, a bonding pad structure, comprising:

a bonding pad substantially surrounded and insulated by a dielectric layer (4), wherein the bonding pad comprises at least one first conductive layer (3) having a wiring layer with a stripe layout and a first edge portion and second conductive layer (6) having a wire bonding portion a second edge portion and a plurality of plugs (four middle rows of 5) electrically connecting the wiring layer and the wire bonding portion;

a conductive structure (two outer rows of 5) surrounding the wire bonding portion, connecting the first edge portion and the second edge portion.

Regarding claims 4 and 27, Fujiki et al. discloses the first conductive layer is a metal layer.

Regarding claims 5 and 28, Fujiki et al. discloses the second conductive layer is a metal layer.

Regarding claims 6 and 11, Fujiki et al. discloses the conductive structure is an array of metal plugs.

Regarding claim 8, Fujiki et al. discloses, as shown in Figures 1-3, a bonding pad structure, comprising:

- a substrate (1) having an interlevel dielectric (ILD) layer (2) thereon,

- a bonding pad formed on the ILD layer and substantially surrounded and insulated by a dielectric layer (4), wherein the bonding pad comprises at least one metal layer (3) having a wiring layer with a stripe layout and a first edge portion, and bonding metal layer (6) having a wire bonding portion a second edge portion and a plurality of plugs (four middle rows of 5) electrically connecting the wiring layer and the wire bonding portion;

- a conductive structure (two outer rows of 5) surrounding the wire bonding portion, connecting the first edge portion and the second edge portion.

Regarding claim 24, Fujiki et al. discloses, as shown in Figures 1-3, a bonding pad structure, comprising:

- a bonding pad substantially surrounded and insulated by a dielectric layer (4), wherein the bonding pad comprises at least one first conductive layer (3) having a wiring layer with a stripe layout and a first edge portion and second conductive layer (6) having a wire bonding

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portion a second edge portion and a plurality of plugs (four middle rows of 5) electrically connecting the wiring layer and the wire bonding portion;

an array of metal plugs (two outer rows of 5) connecting the first edge portion and the second edge portion.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 9, 10, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiki et al. (PN 5,736,791, of record) in view of Huang et al. (PN 6,762,466, of record). Regarding claims 2, 9 and 25, Fujiki et al. discloses the claimed invention including the bonding pad structure as explained in the rejection above. Fujiki et al. does not disclose the structure further comprising an ESD protection device electrically connected to the first conductive layer. However, Huang discloses a structure comprising an ESD protection device (218) electrically connected to a first conductive layer. Note Figures 3-4 of Huang. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the structure further comprising an ESD protection device electrically connected to the first conductive layer, such as taught by Huang et al. in order to protect the circuit from electrostatic discharge.

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Regarding claims 3, 10 and 26, Fujiki et al. and Huang et al. disclose all of the claimed limitations except a material of the IMD layer. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the device of Fujiki et al. and Huang et al. having the materials as that claimed by Applicant, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Response to Arguments

3. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vu whose telephone number is (571) 272-1666. The examiner can normally be reached on Tuesday to Friday 6:00-4:30.

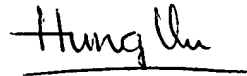
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on (571) 272 - 1732. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vu

June 1, 2006

A handwritten signature in black ink, appearing to read "Hung Vu", written over a horizontal line.

Hung Vu

Primary Examiner